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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

ELLINGTON, ALANDRA

ART UNIT PAPER NUMBER

2855

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/914,327

Applicant(s)

NIELSEN, EVAN

Examiner

Alandra N Ellington

Art Unit

2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 4-6 and 11-23 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 March 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: It contains many spelling errors, for example, pg. 1 lines 16 "practise" should be changed to -- practice --.

Appropriate correction is required.

Claim Objections

2. Claim 11 is objected to because of the following informalities: It contains a spelling error on line 5 "abut" should be changed to -- about --. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-3 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stallabrass et al (3,940,622) in view of Greenblatt et al (6,044,699).

A. With respect to Claim 1, Stallabrass et al discloses a method for local measurement of an icing factor for atmospheric air containing supercooled water that provides at least one surface element 18,19 that is made of a material suitable for ice in atmospheric air to freeze on, the element 18,19

having a predetermined surface area (col. 4 lines 3-25), bringing the surface element 18,19 to a temperature that corresponds essentially to the temperature of the atmospheric air (col. 4 lines 26-68, col. 5 line 1), subsequently creating a relative movement at a predetermined velocity between the atmospheric air and the surface element 18,19 by allowing the surface element 18,19 to move through the atmospheric air and for a predetermined period of time (col. 3 lines 34-44, col. 7 lines 8-15).

However, Stallabrass et al does not specifically teach subsequently measuring the thickness or mass of the ice frozen fast to the surface element by means of a measurement device configured therefore after a predetermined period of time. Greenblatt et al teaches subsequently measuring the thickness or mass of the ice frozen fast to the surface element 20,30 by means of a measurement device 10 configured therefore after a predetermined period of time (col. 5 lines 39-41). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Stallabrass et al with the teachings of Greenblatt et al to include subsequently measuring the thickness or mass of the ice frozen fast to the surface element by means of a measurement device configured therefore after a predetermined period of time for the purpose of accurately measuring the amount of precipitation on the body of device.

Art Unit: 2855

- B. With respect to Claim 2, Greenblatt et al teaches ice frozen fast being removed from the surface element 20 whereupon a renewed measurement process can be performed (col. 4 lines 61-67, col. 5 lines 1-38).
- C. With respect to Claim 3, Greenblatt et al teaches ice frozen fast being removed by heating 26 of the surface element 20 (col. 4 lines 61-67, col. 5 lines 1-38).
- D. With respect to Claim 8, Stallabrass et al discloses an apparatus 1 for local measurement of an icing factor for atmospheric air containing supercooled water that provides at least one surface element 18,19 that is made of a material suitable for ice in atmospheric air to freeze on, the element 18,19 having a predetermined surface area (col. 4 lines 3-25), wherein the apparatus 1 further comprises means configured for moving the surface element through the atmospheric air at a predetermined rate and for a predetermined period of time (col. 3 lines 34-44, col. 7 lines 8-15). However, Stallabrass et al does not specifically teach an apparatus that measures the thickness or mass of the ice frozen fast onto the surface element after the predetermined period of time, during which the surface element has been moved through the atmospheric air. Greenblatt et al teaches an apparatus 10 that measures the thickness or mass of the ice frozen fast onto the surface element 20,30 after the predetermined period of time, during which the surface element 20,30 has been moved

through the atmospheric air (col. 5 lines 39-41). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Stallabrass et al with the teachings of Greenblatt et al to include measuring the thickness or mass of the ice frozen fast to the surface element by means of a measurement device configured therefore after a predetermined period of time for the purpose of accurately measuring the amount of precipitation on the body of device.

E. With respect to Claim 9, Greenblatt et al teaches an apparatus with a weighing device 50 configured for weighing and recording at least the weight of the surface element 30 (col. 5 lines 39-41, col. 6 lines 1-9).

F. With respect to Claim 10, Greenblatt et al teaches means 26 for heating the surface element 20,30 (col. 4 lines 61-67, col. 5 lines 1-38).

4. Claims 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stallabrass et al (3,940,622) in view of Greenblatt et al (6,044,699) as applied to claims 1 and 8 above, and further in view of Choynet (5,317,915).

A. With respect to Claim 7, Stallabrass et al discloses a method for local measurement of an icing factor for atmospheric air containing supercooled water that provides at least one surface element 18,19 that is made of a material suitable for ice in atmospheric air to freeze on, the element 18,19 having a predetermined surface area (col. 4 lines 3-25), bringing the surface element 18,19 to a temperature that corresponds essentially to the

temperature of the atmospheric air (col. 4 lines 26-68, col. 5 line 1), subsequently creating a relative movement at a predetermined velocity between the atmospheric air and the surface element 18,19 by allowing the surface element 18,19 to move through the atmospheric air and for a predetermined period of time (col. 3 lines 34-44, col. 7 lines 8-15).

Greenblatt et al teaches subsequently measuring the thickness or mass of the ice frozen fast to the surface element 20,30 by means of a measurement device 10 configured therefore after a predetermined period of time (col. 5 lines 39-41). However, Stallabrass et al in view of Greenblatt et al does not specifically teach at least two surface elements that are rotatably arranged on a rotor shaft, and that the movement of the two surface elements is accomplished by a rotation of the rotor shaft.

Choisnet teaches at least two surface elements that are rotatably arranged on a rotor shaft 6,7, and that the movement of the two surface elements is accomplished by a rotation of the rotor shaft 6,7 (col. 3 lines 23-26 {Figs. 1 and 3}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify the combination of Stallabrass et al in view of Greenblatt et al with the teaching of Choisnet to include at least two surface elements that are rotatably arranged on a rotor shaft wherein the movement of the two surface elements are accomplished by a rotation of the rotor shaft for the

purpose of determining the aerodynamic forces generated on the rotor shaft by the rotation of the blades (see Choynet, col. 3 lines 23-26).

- B. With respect to Claim 11, Stallabrass et al discloses an apparatus 1 for local measurement of an icing factor for atmospheric air containing supercooled water that provides at least one surface element 18,19 that is made of a material suitable for ice in atmospheric air to freeze on, the element 18,19 having a predetermined surface area (col. 4 lines 3-25), wherein the apparatus 1 further comprises means configured for moving the surface element through the atmospheric air at a predetermined rate and for a predetermined period of time (col. 3 lines 34-44, col. 7 lines 8-15). Greenblatt et al teaches an apparatus 10 that measures the thickness or mass of the ice frozen fast onto the surface element 20,30 after the predetermined period of time, during which the surface element 20,30 has been moved through the atmospheric air (col. 5 lines 39-41). However, Stallabrass et al in view of Greenblatt et al does not specifically teach an apparatus comprising a rotor element with a rotor shaft, and at least two surface elements that extend from the rotor shaft and protrude there from, and wherein means are provided for rotating the rotor about its axis. Choynet teaches an apparatus comprising a rotor element with a rotor shaft 6,7, and at least two surface elements that extend from the rotor shaft and protrude there from, and wherein means are provided for rotating the rotor 6,7 about its axis (col. 3 lines 23-26 {Figs. 1 and 3}). It

would have been obvious at the time the invention was made to one having ordinary skill in the art to modify the combination of Stallabrass et al in view of Greenblatt et al with the teaching of Choisnet to include at least two surface elements that are rotatably arranged on a rotor shaft wherein the movement of the two surface elements are accomplished by a rotation of the rotor shaft for the purpose of determining the aerodynamic forces generated on the rotor shaft by the rotation of the blades (see Choisnet, col. 3 lines 23-26).

Allowable Subject Matter

5. Claims 4-6 and 12-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pridham (4,697,254) discloses a system and method for measuring ice thickness.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra N Ellington whose telephone number is

Art Unit: 2855

(703)305-4449. The examiner can normally be reached on Monday - Friday, 6:30am - 4:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (703)305-4816. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-7382 for regular communications and (703)305-3839 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Alandra Ellington
Art Unit 2855



ane
May 30, 2003



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